Remarks

Currently pending are claims 1-63. Applicants have amended claim 1 to further define the equivalents of hydroxyl groups in the claimed composition. Applicants have also amended claim 27 to include the equivalents of epoxy, acrylate and hydroxyl groups in the claimed composition. Finally, Applicants have amended TABLE III and paragraphs [0106] – [0108] to correct an obvious error in the calculation of epoxy equivalents/100 g of composition for Examples 1-10. In amended TABLE III, Applicants have corrected the epoxy equivalent weight values for the epoxy products in Examples 1-10 to conform to the epoxy equivalent weight values expressed in product literature. No new matter has been added. In view of the following remarks, Applicants respectfully request reconsideration by the Examiner, and advancement of the application to allowance.

35 U.S.C. §§ 102/103

The Examiner rejected claims 1-10, 12-14, 17-18, 20-25, 27-32, 34-41 and 43-55 as being anticipated by or obvious over Lapin et al. (WO 97/42549 and US 6,251,557). The Examiner also rejected claims 1-7, 9, 12-14, 17, 19, 21-25, 27-30 and 34-35 as being anticipated by or obvious over Ha et al. (US 6,455, 121). Finally, the Examiner rejected claims 1-15, 17-18, 20-25, 27-38, 40-41 and 43-45 as being anticipated by or obvious over Moussa et al. (US 6,833,231). As illustrated below, neither of the above references directly disclose or suggest a photocurable composition having the combination of less than 0.54 equivalents of cationically curable groups, less than 0.10 equivalents of acrylate groups and between less than 0.10 to about 0.03 equivalents of hydroxyl groups per 100 grams of the composition as claimed in the present application. Furthermore, the compositions disclosed in these references do not necessarily possess this claimed combination of characteristics.

Lapin et al. generally disclose a composition containing (i) at least two epoxy resins; (ii) at least one multifunctional acrylate; (iii) a hydroxyfunctional compound; (iv) a cationic photoinitiator; and (v) a free radical photoinitiator. The equivalents of cationically curable groups, acrylate groups and hydroxyl groups for the compositions specifically disclosed in Tables 1 and 2 in Lapin et al. are as follows:

				Ex.	#					
	Fcnal Equiv Wt Per 100 g raw material	I	II	III	IV	V	VI	VII	VIII	IX
Component				Fcnal	Eq Wt	per 100	g			
Epoxies										
EPON 1001F	537	0.047	0.051	0.047	0.033	0.061	0.057	0.044	0.050	0.056
EPON 828	188	0.122	0.053	0.133	0.213					
UVR 6105	131					0.13	0.145			0.145
UVR 6128	200							0.071	0.113	
Acrylates										
SR 454	143	0.20	0.33	0.14	0.20	0.157		0.212	0.224	0.14
SR 499	187						0.134			
Photomer 3016	226							0.05		
Tone M100	344	0.06		0.073	0.03	0.065	0.058	0.041	0.038	0.073
Polyols										
Tone 301			0.10							
Photoinitiators										
UVI 6974										
I-184										
Equivalents										
Epoxy/100 g		0.17	0.10	0.18	0.25	0.19	0.20	0.12	0.16	0.20
Acrylate/100 g		0.26	0.33	0.21	0.23	0.22	0.19	0.30	0.26	0.21
Hydroxy/100 g		0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00

As shown above, the compositions disclosed in Lapin each contain greater than 0.10 equivalents of acrylate groups per 100 g of composition which is outside Applicants claimed range. Thus, Lapin et al. does not disclose a photocurable composition having the combination of less than 0.54 equivalents of cationically curable groups, less than

0.10 equivalents of acrylate groups and between less than 0.10 to 0.03 equivalents of hydroxyl groups per 100 grams of the composition as claimed in the present application. Nor do the photocurable compositions disclosed in Lapin et al. necessarily possess this claimed combination.

Ha et al. generally disclose a pressure sensitive adhesive containing (i) at least one acrylate oligomer (ii) at least one reactive diluent (iii) at least one epoxy resin (iv) at least one diol (v) at least one free radical photoinitiator (vi) at least one cationic photoinitiator and (vii) optionally additives. The pressure sensitive adhesive compositions specifically disclosed in Examples 1-3 each contain isobornyl acrylate (having an acrylate equivalent weight of 104) which provides 0.18, 0.14 and 0.2 equivalents of acrylate groups per 100 grams of composition which is outside Applicants claimed range. Thus, Ha et al. does not disclose a photocurable composition having the combination of less than 0.54 equivalents of cationically curable groups, less than 0.10 equivalents of acrylate groups and between less than 0.10 to 0.03 equivalents of hydroxyl groups per 100 grams of the composition as claimed in the present application. Moreover, the compositions in Ha et al. do not necessarily possess this claimed combination.

Finally, Moussa et al. generally disclose a composition containing (i) at least one polymerizing organic substance (ii) at least one free-radical polymerizing organic substance (iii) at least one cationic polymerization initiator (iv) at least one free-radical polymerization initiator (v) at least one hydroxyl-functional compound and (vi) at least one epoxy interpenetrating polymer compound. The compositions specifically disclosed in Comparison Examples 1-3 and Examples 1-6 in Moussa et al. are as follows:

				Ex.	#					
	Fcnal Equiv Wt Per 100 g raw material	Comp 1	Comp 2	Comp 3	1	2	3	4	5	6
Component				Fcnal	Eq Wt	per 100	g			
Epoxies										
SL5430	567		0.567	0.545	0.382	0.49	0.464	0.503	0.480	0.455
Taxtic 695	370	0.37			0.078	0.012	0.025	0.013	0.012	0.024
Acrylates										
SL5430	82		0.082	0.079	0.055	0.071	0.067	0.073	0.070	0.066
Other										
Fumed Silica										
Excel E2691A										
Colloidal Silica										
Equivalents										
Epoxy/100 g		0.37	0.57	0.55	0.46	0.50	0.49	0.51	0.049	0.48
Acrylate/100 g		0.00	0.08	0.08	0.06	0.07	0.07	0.07	0.07	0.07
Hydroxy/100 g		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Therefore, Moussa et al. does not directly disclose or suggest a photocurable composition having the combination of less than 0.54 equivalents of cationically curable groups, less than 0.10 equivalents of acrylate groups and between less than 0.10 to 0.03 equivalents of hydroxyl groups per 100 grams of the composition as claimed in the present application. Moreover, the compositions in Moussa et al. do not necessarily possess this claimed combination. Accordingly, Applicants respectfully request the rejections to the claims be withdrawn.

Conclusion

In view of the foregoing amendments and remarks, Applicants respectfully submit that the application is now in condition for allowance, and respectfully request issuance of a Notice of Allowance directed towards the pending claims.

The Commissioner of Patents is hereby authorized to deduct any fee due in connection with the filing of this document from Huntsman Corporation Deposit Account No. 08-3442.

Respectfully Submitted,
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